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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/580,390

05/22/2006

Marinus Gerardus Johannes Van Beuningen

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12/23/2008

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EXAMINER

BASS, DIRK R

ART UNIT

PAPER NUMBER

4132

MAIL DATE

DELIVERY MODE

12/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/580,390 | Applicant(s) VAN BEUNINGEN ET AL. | |
| | Examiner DIRK BASS | Art Unit 4132 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 17-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>22 May 2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, Claims 1-16, in the reply filed on 2 December 2008 is acknowledged.
2. Claims 17-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 2 December 2008.
3. The requirement is still deemed proper and is therefore made FINAL.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it exceeds the maximum amount of words allowed. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Venema, WO 01/12846.

8. Regarding claim 1, Venema ('846) discloses a method for screening of compounds (see "analyte", pg. 5, l. 31, and "biomolecule", pg. 6, l. 1) for drug candidates (pg. 5, l. 31 – pg. 6, l. 6) comprising:

- a. Providing a solid porous support (see "porous metal oxide membranes", pg. 4, l. 29 and "membrane", pg. 10, l. 24) having first and second surfaces (top and bottom surfaces of "membrane") and at least one area with a plurality of through going channels (collection of pores forming channels in "membrane"); wherein said solid porous support comprise compounds (see "oligonucleotide A", pg. 10, l. 24) within predefined regions of the said support (see "spotted onto APS membrane", pg. 10, l. 24); wherein said compounds within the porous structure are stored in dried condition, wherein said dried condition is obtained after a drying treatment by slow evaporation, vacuum drying or by blowing air or inert gas above and below said solid support (pg. 10, l. 30 - pg. 11, l. 5);
- b. Providing a liquid sample comprising at least one molecular target (see "complementary oligonucleotide B", pg. 11, l. 7-8);

- c. Mixing said dried compounds of step (d) (see “oligonucleotide A”, pg. 10, l. 24) with said liquid sample of step (e) (see “complementary oligonucleotide B”, pg. 11, l. 7-8) by flow of the sample through said predefined regions of the solid support through the said through-going channels (pg. 11, l. 7-9);
 - d. Screening said compounds for drug candidates (see “multi-analyte detection”, pg. 5, l. 31 – pg. 6, l. 6); said screening is by monitoring in an assay a compound-target interaction by measurement of a signal, said signal indicating interaction between a compound and a molecular target (pg. 6, l. 4-13);
 - e. Optionally screening for a compound having a putative effect on a drug candidate identified in step (g) (see “multi-analyte detection”, pg. 5, l. 31 – pg. 6, l. 13);
9. Regarding claim 2, Venema ('846) discloses a method wherein said compounds are chemical compounds (see "oligonucleotides", pg. 6, l. 21).
10. Regarding claim 3, Venema ('846) discloses a method wherein said compounds are drugs selected from a chemical candidate library (see “biomolecules”, pg. 1, l. 2—21 and “oligonucleotides”, pg. 6, l. 21). It is implicit in Venema ('846) that screened biomolecules may be used as drugs, for instance, as drugs for vaccines (pg. 1, l. 20-21) selected from any grouping of such biomolecules (i.e. a "library").
11. Regarding claim 4, Venema ('846) discloses a method wherein compounds are chosen from drugs (see “biomolecules”, pg. 6, l. 1).

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12. Regarding claim 5, Venema ('846) discloses a method wherein the deposition of compounds is from above the support by a high-precision x-y-z micro-pipettor (see "spotter", pg. 10, l. 23).

13. Regarding claim 6, Venema ('846) discloses a method wherein said compound is immobilized by covalent attachment (pg. 3, l. 12).

14. Regarding claim 7, Venema ('846) discloses a method wherein said molecular target is a derivative of nucleic acids (see "oligonucleotide B", pg. 11, l. 7-8).

15. Regarding claim 8, Venema ('846) discloses a method wherein said molecular target is a labeled molecular target (pg. 6, l. 14-19).

16. Regarding claim 9, Venema ('846) discloses a method wherein said identifying of the compound-molecular target interaction is by luminescence microscopy (pg. 11, l. 9-11)

17. Regarding claim 10, Venema ('846) discloses a method wherein said luminescence is fluorescence (pg. 11, l. 9-11).

18. Regarding claim 11, Venema ('846) discloses a method wherein said solid support is a flow-through solid support (pg. 11, l. 7-9).

19. Regarding claims 12-13, Venema ('846) discloses a method wherein said solid support is a metal oxide solid support; wherein said metal oxide solid support is an aluminum oxide solid support (pg. 4, l. 29-30).

20. Regarding claim 14, Venema ('846) discloses a method wherein said assaying is performed in real-time (pg. 11, l. 7-11).

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21. Regarding claim 15, Venema ('846) discloses a method wherein said assaying is conducted by end-point analysis. It is implicit in Venema ('846) that when a peptide (pg. 6, l. 21-26), for instance an enzyme, is used in a multi-analyte detection method (pg. 5, l. 31 - pg. 6, l. 3) for detecting its specific ligand, end-point analysis is done using the same instrumentation disclosed for real-time analysis (pg. 11. l. 7-11).

22. Regarding claim 16, Venema ('846) discloses a method wherein detector molecules are present within the pores of the solid support prior to initiating an assay (see "loaded with biomolecules", pg. 2, l. 4-5 and pg. 10, l. 2 - pg. 11, l. 13).

Conclusion

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIRK BASS whose telephone number is (571)270-7370. The examiner can normally be reached on Monday - Thursday 10am-4pm.

24. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MIKE LAVILLA can be reached on 5712721539. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

25. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DRB/

/Dirk R. Bass/

December 10, 2008

/Michael La Villa/

Michael La Villa

Supervisory Patent Examiner, Art Unit 4132

21 December 2008